UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,700	06/29/2001	William Lawrance	52003204	9112

7590 01/12/2005	EXAMINER
Dr. Russell W. Guenthner	MANOSKEY, JOSEPH D

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ART UNIT	PAPER NUMBER
2113	

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sh et with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 October 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4,6 and 9* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4,6, and 9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1.   Claim 1is objected to because of the following informalities:

Claim 1 recites "the plurality of plurality of computer systems," it is believed that

this should read "the plurality of computer systems".

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1, 4, 6, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Housel, III et al., U.S. Patent 5,907,678, hereinafter referred to as "Housel", in view

of Chafle et al, U.S. Patent Application Publication 2002/0152271, hereinafter referred

to as "Chafle".

4.   Referring to claim 1, Housel teaches a method of checkpointing and restarting for

a plurality of computer systems (See Fig. 1 and Col. 2, lines 30-60 and Col. 4, lines 42-

43). Housel discloses the computer system having a first computer and a second

computer with an application running on each (See Col. 2, lines 34-36). Also the

second computer is taught to contain cache that can be implemented as a hard disk

(See Fig. 1 and Col. 7, lines 52-53). Housel teaches checkpointing of the first program

and sending checkpoint request to the second computer. The second computer

provides a checkpoint and copies the checkpoints into its checkpoint cache (See Col. 2,

line 61 to Col. 3, line15). After the checkpoints have been stored the second computer

transmits a checkpoint confirmation to the first computer, which is interpreted as a

checkpoint response (See Col. 3, lines 16-18).

Housel teaches repeating all the steps when it is determined that a new

checkpoint is desired (See Col. 3, lines 25-27).

Housel discloses the client, or first program, sending an acknowledgement

message to the server application, second program, for starting a new session with the

checkpoint cache, which is interpreted as transmitting a rollback request. Housel

teaches restarting the computers using the checkpoint cache of the second computer to

restart the session. Restarting the session is interpreted as rolling back both first and

second programs with the checkpoint status information, which includes transmitting the

checkpoint status information from the second to the first computer. The most recent

checkpoint cache is used (See Col. 4, lines 17-41).

Housel is silent on whether the computer system is a heterogeneous system,

however Housel does disclose the system being composed of a client and a server

(See Col. 2, line 39). Chafle teaches a rollback system for a client/server environment

that is heterogeneous (See paragraphs 10 and 11). It would be obvious to one of

ordinary skill in the art at the time of the invention to combine the rollback system of

Housel with the heterogeneous system of Chafle. This would have been obvious to one

of ordinary skill in the art at the time of the invention to do because a large part of

environments will be heterogeneous in the near future (See Chafle, paragraph 11).

5.   Referring to claim 4, Housel and Chafle disclose all the limitations (See rejection

of claim 1) including the second computer coping checkpoint cache, this is interpreted

as the first and second checkpoint file being the same file (See Chafle, Col. 3, lines 5-

15).

6.   Referring to claim 6, Housel and Chafle teach all the limitations (See rejection of

claim 1) including a method of checkpointing and restarting for a plurality of computer

systems (See Housel, Fig. 1 and Col. 2, lines 30-60 and Col. 4, lines 42-43). Housel

discloses the computer system having a first computer and a second computer with an

application running on each (See Col. 2, lines 34-36). Also the second computer is

taught to contain cache that can be implemented as a hard disk (See Housel, Fig. 1 and

Col. 7, lines 52-53). Housel discloses the system being composed of a client and a

server, which is interpreted as being a heterogeneous computer system (See Col. 2,

line 39). Housel teaches checkpointing of the first program and sending checkpoint

request to the second computer. The second computer provides a checkpoint and

copies the checkpoints into its checkpoint cache (See Col. 2, line 61 to Col. 3, line15).

After the checkpoints have been stored the second computer transmits a checkpoint

confirmation to the first computer, which is interpreted as a checkpoint response (See

Housel, Col. 3, lines 16-18). Housel discloses the method occurring with multiple

terminal emulator applications and multiple host applications across various sessions

(See Col. 9, lines 17-19). This is interpreted as the first program on the first computer

sending and checkpoint status information to a third program on a third computer for

storing.

7.   Referring to claim 9, Housel and Chafle disclose all the limitations (See rejection

of claim 1) including a plurality of sessions open between the first and second program

for communications (See Housel, Col. 2, lines 30-35). Housel also teaches flushing the

files including the checkpoint files (See Col. 16, lines 25-30).

Response to Arguments

8.   Applicant's arguments, see page 11 and 12 of amendment, filed October 6,

2004, with respect to the rejection(s)of claim(s) 1-20 under 35 U.S.C. 102(b) have been

fully considered and are persuasive. Therefore, the rejection has been withdrawn.

However, upon further consideration, a new ground(s) of rejection is made in view of

Chafle, see above rejection.

Concerning applicant's argument that Housel does not teach rollback system but

rather a restart system, because a restart system cannot be assumed to be a restart

system. The examiner respectfully disagrees with this argument. Housel does not just

teach a restart system but a restart system that uses checkpoint cache (See Col. 4,

lines 17-41). This is seen as restarting at a checkpointed state of the system and is functionally equivalent to a rollback system.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Manoskey whose telephone number is (571) 272-3648. The examiner can normally be reached on Mon.-Fri. (7:30am to 4pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JDM
January 7, 2005

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